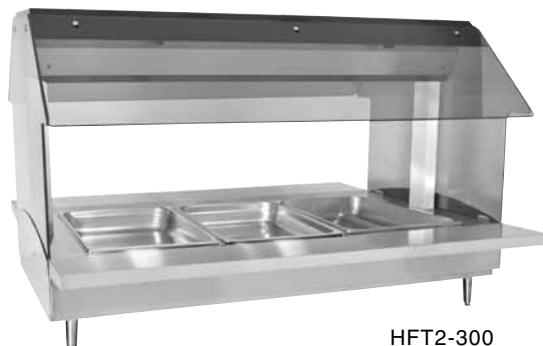


# **Hot Food Table Merchandiser**



HFT2SYS-400 (Standard)



HFT2-300



HFT2SYS-500 (Deluxe)

## **Models:**

**HFT2SYS-300**

**HFT2-300**

**HFT2SYS-400**

**HFT2-400**

**HFT2SYS-500**

**HFT2-500**

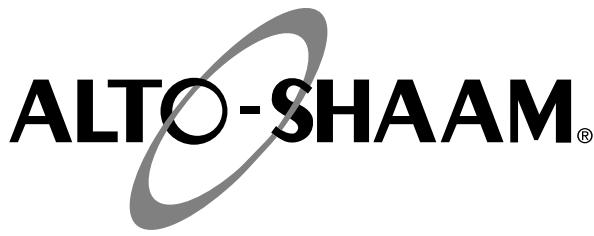
**• INSTALLATION**

**• OPERATION**

**• MAINTENANCE**



W164 N9221 Water Street • P.O. Box 450 • Menomonee Falls, Wisconsin 53052-0450 USA  
PHONE: 262.251.3800 • 800.558.8744 USA / CANADA FAX: 262.251.7067 • 800.329.8744 U.S.A. ONLY  
[www.alto-shaam.com](http://www.alto-shaam.com)



Delivery .....	1
Unpacking .....	1
Safety Procedures and Precautions .....	2

## **Installation**

Installation Requirements .....	3
Leveling .....	3
Dimension Drawings, weights & capacities .....	4-8
Options and Accessories.....	8
Electrical Specifications .....	9

## **Operating Instructions**

User Safety Information.....	10
Start-up Operation.....	10
Operating Procedures.....	11
General Holding Guidelines.....	12

## **Care and Cleaning**

Cleaning and Preventative Maintenance .....	13
Protecting Stainless Steel Surfaces.....	13
Cleaning Agents .....	13
Cleaning Materials .....	13
Equipment Care .....	14
Clean Daily .....	14

## **Sanitation**

Sanitation/Food Safety .....	15
Internal Food Product Temperatures.....	15

## **Service**

Service View & Parts Lists .....	
Lexan Guards .....	16
Tray Slides .....	16
Panel Colors, Deluxe Parts .....	18
Core Unit .....	18-19
Base .....	20-21
Cable Heating Replacement Kits.....	21
Calibration.....	21

## **Wire Diagrams**

Always refer to the wire diagram(s) included with the unit for most current version.

## **Warranty**

Transportation Damage and Claims .....	Back Cover
Limited Warranty.....	Back Cover

# ALTO-SHAAM®

## DELIVERY

This Alto-Shaam appliance has been thoroughly tested and inspected to ensure only the highest quality unit is provided. Upon receipt, check for any possible shipping damage and report it at once to the delivering carrier. *See Transportation Damage and Claims section located in this manual.*

This appliance, complete with unattached items and accessories, may have been delivered in one or more packages. Check to ensure that all standard items and options have been received with each model as ordered.

Save all the information and instructions packed with the appliance. Complete and return the warranty card to the factory as soon as possible to ensure prompt service in the event of a warranty parts and labor claim.

This manual must be read and understood by all people using or installing the equipment model. Contact the Alto-Shaam Tech Team Service Department if you have any questions concerning installation, operation, or maintenance.

**NOTE:** All claims for warranty must include the full model number and serial number of the unit.

## UNPACKING

1. Carefully remove the appliance from the carton or crate.

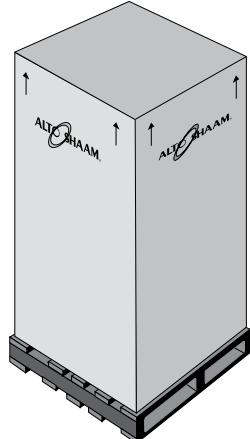
**NOTE:** Do not discard the carton and other packaging material until you have inspected the unit for hidden damage and tested it for proper operation.

2. Read all instructions in this manual carefully before initiating the installation of this appliance.

### DO NOT DISCARD THIS MANUAL.

This manual is considered to be part of the appliance and is to be provided to the owner or manager of the business or to the person responsible for training operators. *Additional manuals are available from the Alto-Shaam Tech Team Service Department.*

3. Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power. Store any accessories in a convenient place for future use.



## SAFETY PROCEDURES AND PRECAUTIONS

Knowledge of proper procedures is essential to the safe operation of electrically and/or gas energized equipment. In accordance with generally accepted product safety labeling guidelines for potential hazards, the following signal words and symbols may be used throughout this manual.

### DANGER



Used to indicate the presence of a hazard that **WILL** cause severe personal injury, death, or substantial property damage if the warning included with this symbol is ignored.

### WARNING



Used to indicate the presence of a hazard that **CAN** cause personal injury, possible death, or major property damage if the warning included with this symbol is ignored.

### CAUTION



Used to indicate the presence of a hazard that can or will cause minor or moderate personal injury or property damage if the warning included with this symbol is ignored.

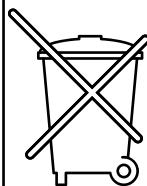
### CAUTION

Used to indicate the presence of a hazard that can or will cause minor personal injury, property damage, or a potential unsafe practice if the warning included with this symbol is ignored.

**NOTE:** Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.

1. This appliance is intended to hold foods for the purpose of human consumption. No other use for this appliance is authorized or recommended.
2. This appliance is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users.
3. Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified technical personnel.
4. This manual should be considered a permanent part of this appliance. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the appliance if the item is sold or moved to another location.

### NOTE



For equipment delivered for use in any location regulated by the following directive:

**DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.**

# INSTALLATION

## SITE INSTALLATION

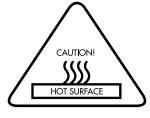
### DANGER



IMPROPER INSTALLATION,  
ALTERATION, ADJUSTMENT,  
SERVICE, OR MAINTENANCE COULD  
RESULT IN SEVERE INJURY, DEATH,  
OR CAUSE PROPERTY DAMAGE.

READ THE INSTALLATION,  
OPERATING AND MAINTENANCE  
INSTRUCTIONS THOROUGHLY  
BEFORE INSTALLING OR SERVICING  
THIS EQUIPMENT.

### CAUTION



METAL PARTS OF THIS EQUIPMENT  
BECOME EXTREMELY HOT WHEN  
IN OPERATION. TO AVOID BURNS,  
ALWAYS USE HAND PROTECTION  
WHEN OPERATING THIS APPLIANCE.

### CAUTION



TO PREVENT PERSONAL INJURY,  
USE CAUTION WHEN MOVING OR  
LEVELING THIS APPLIANCE.

### CAUTION

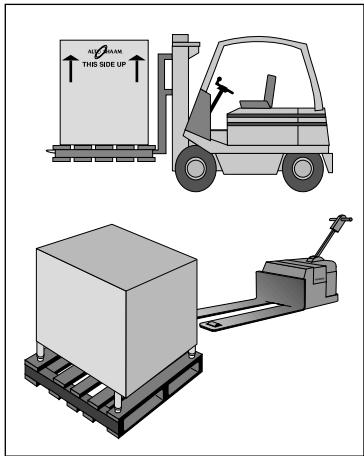


The performance of this unit has  
been optimized using the factory  
provided bulbs. These bulbs should  
be replaced with an exact replacement  
or with a factory recommended  
replacement. These bulbs have been  
treated to resist breakage and must be  
replaced with similarly treated bulbs in  
order to maintain compliance with NSF  
standards. **DO NOT** over-tighten bulbs  
in their receptacles as this can cause  
damage to the bulb filament.

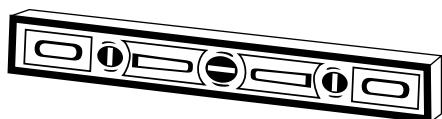
## SITE INSTALLATION

In order to maintain established National Sanitation Foundation standards, all stationary floor models must be sealed to the floor with a R.T.V. or silastic meeting N.S.F. requirements or have 6" (153mm) unobstructed clearance beneath the unit.

1. The appliance must be installed on a stable and level surface.
2. **DO NOT** install this appliance in any area where it may be affected by any adverse conditions such as steam, grease, dripping water, high temperatures, or any other severely adverse conditions.
3. **DO NOT** install a heated display case near a cold air source such as a freezer, air conditioning vents, or in any area where outside air fluctuation can affect performance.
4. This appliance must be kept free and clear of any obstructions blocking access for maintenance or service.



A number of adjustments are associated with initial installation and start-up. It is important that these adjustments be conducted by a qualified service technician. Installation and start-up adjustments are the responsibility of the dealer or user. These adjustments include but are not limited to thermostat calibration, door adjustment, leveling, electrical hook-up and installation of optional casters or legs.



### LEVELING

Level the appliance from side-to-side and front-to-back with the use of a spirit level.

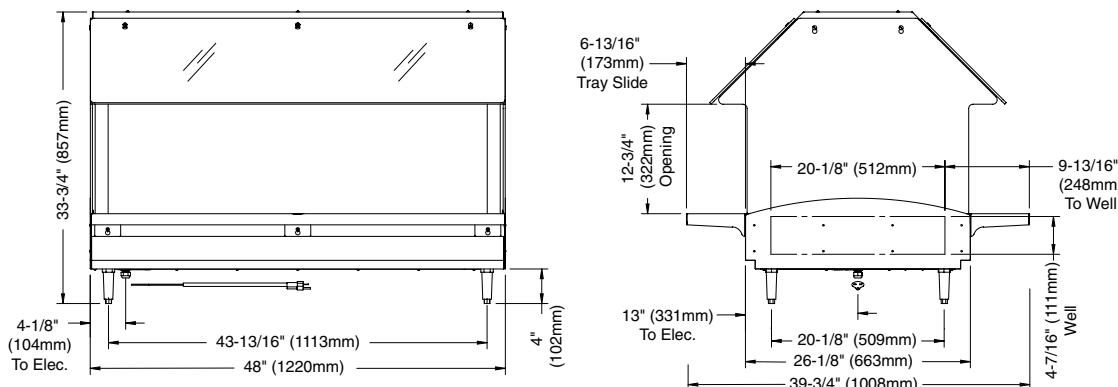
We recommend checking the level periodically to make certain the floor has not shifted nor the appliance moved.

**NOTE:** Failure to properly level this appliance can cause improper function.

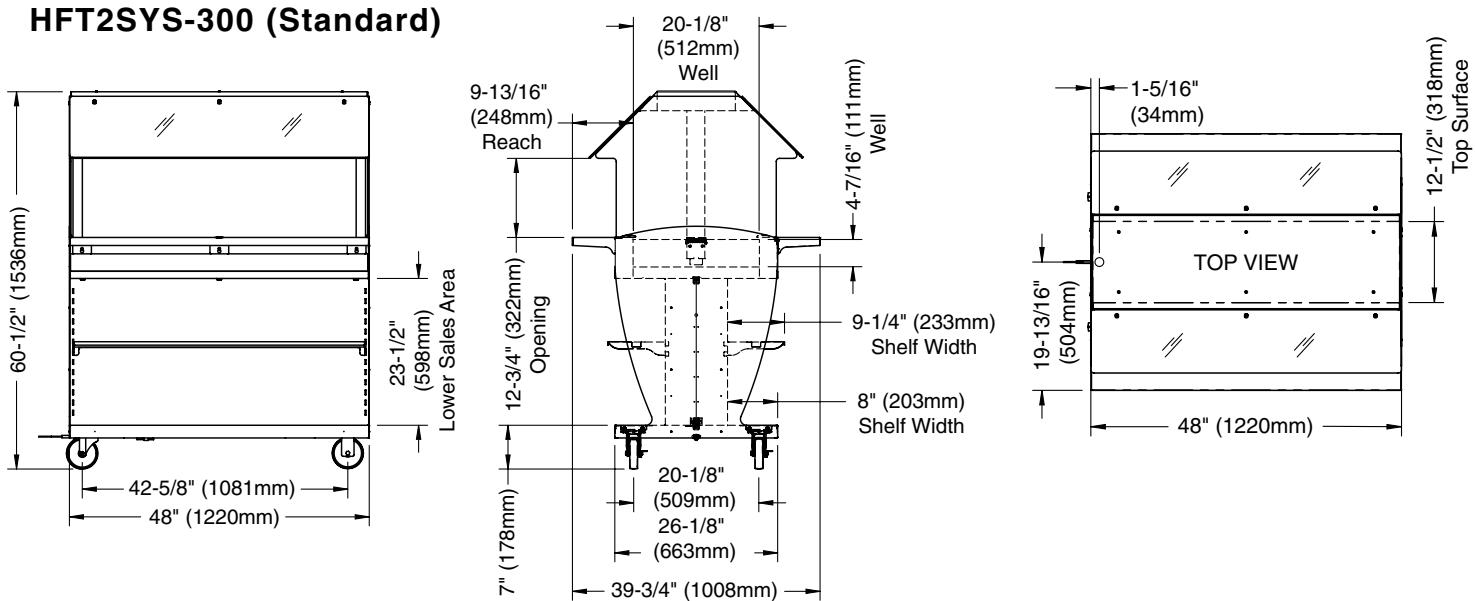
# INSTALLATION

## SITE INSTALLATION

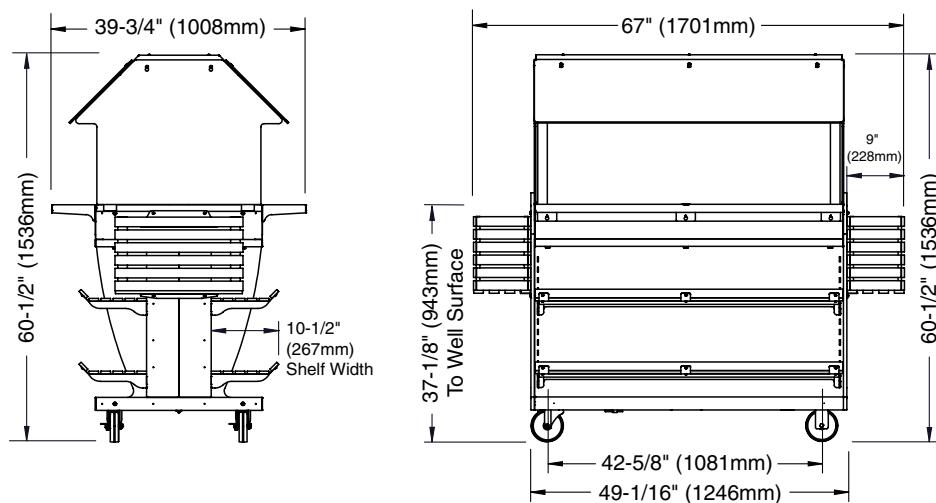
### HFT2-300



### HFT2SYS-300 (Standard)



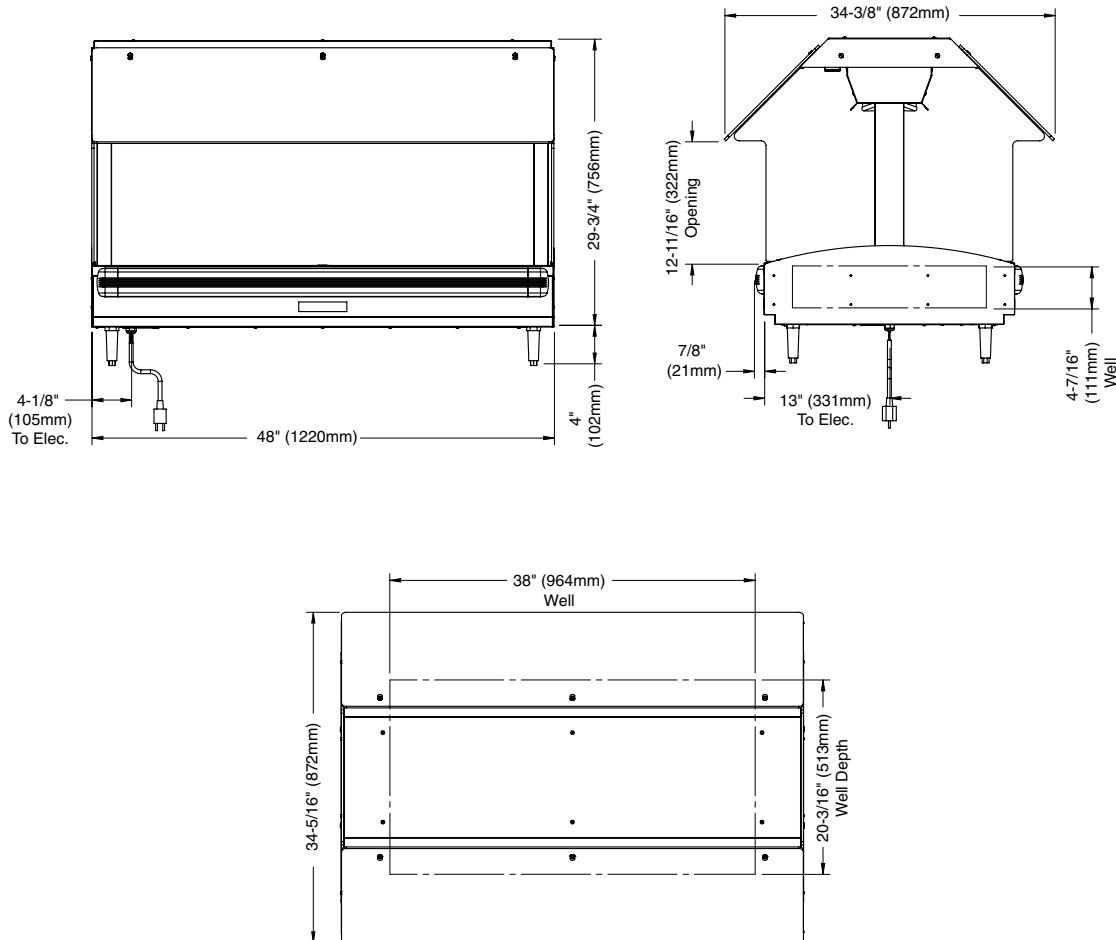
### HFT2SYS-300 (Deluxe)



# INSTALLATION

## SITE INSTALLATION

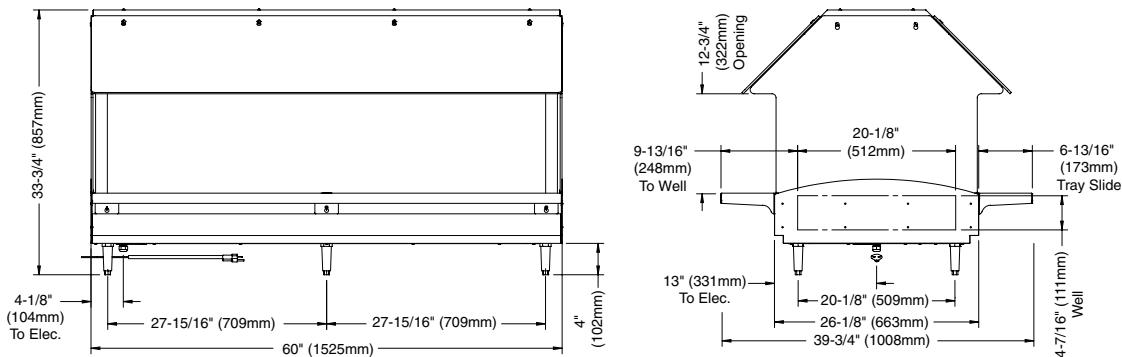
### HFT2-300 (230V, International, with Bumper)



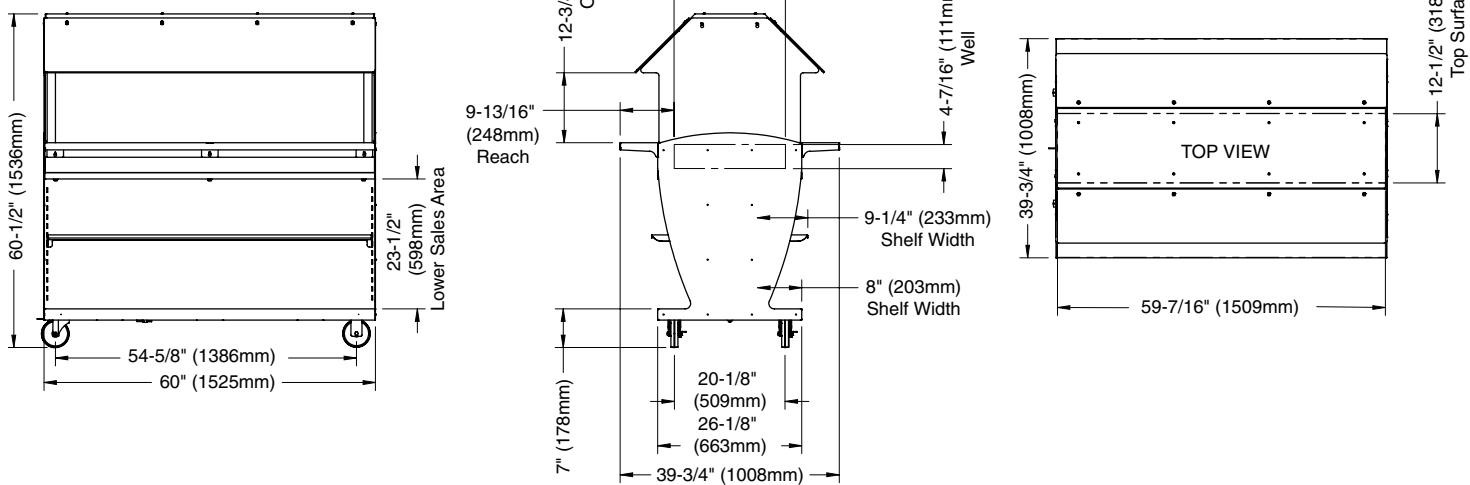
# INSTALLATION

## SITE INSTALLATION

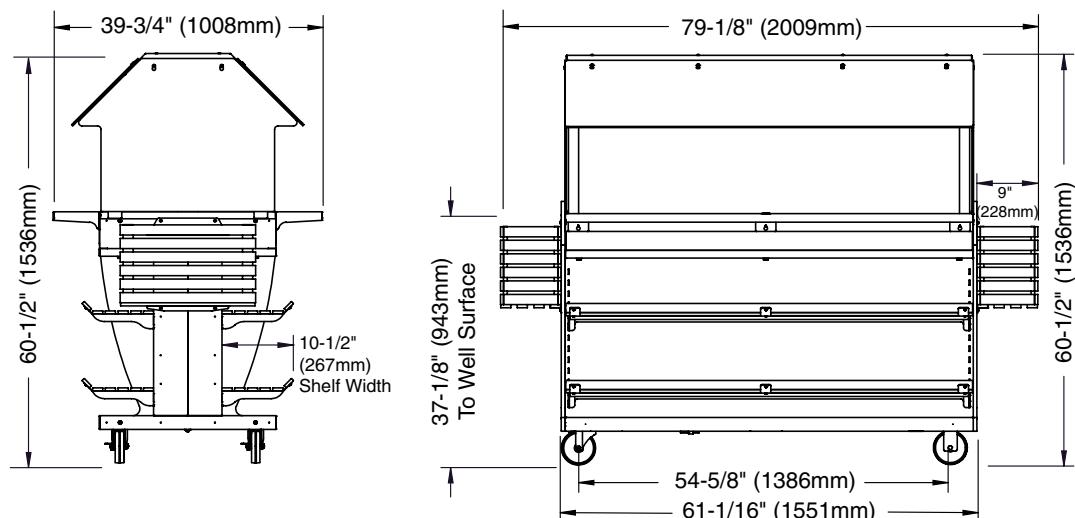
### HFT2-400



### HFT2SYS-400 (Standard)



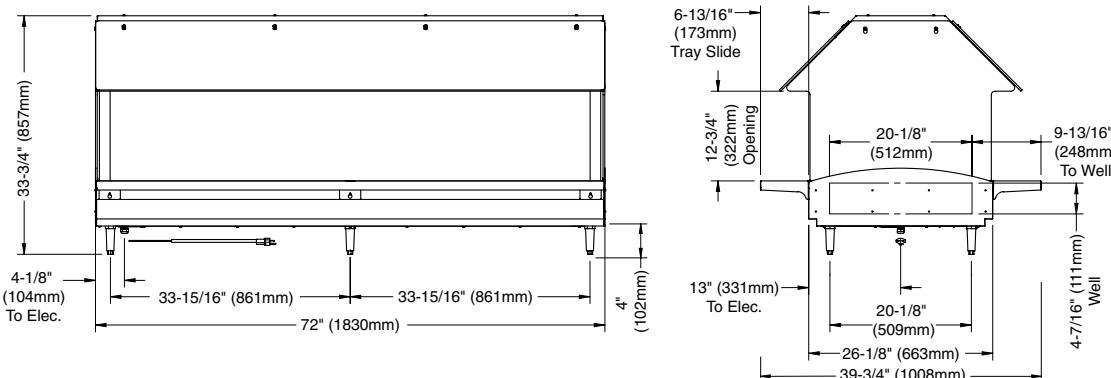
### HFT2SYS-400 (Deluxe)



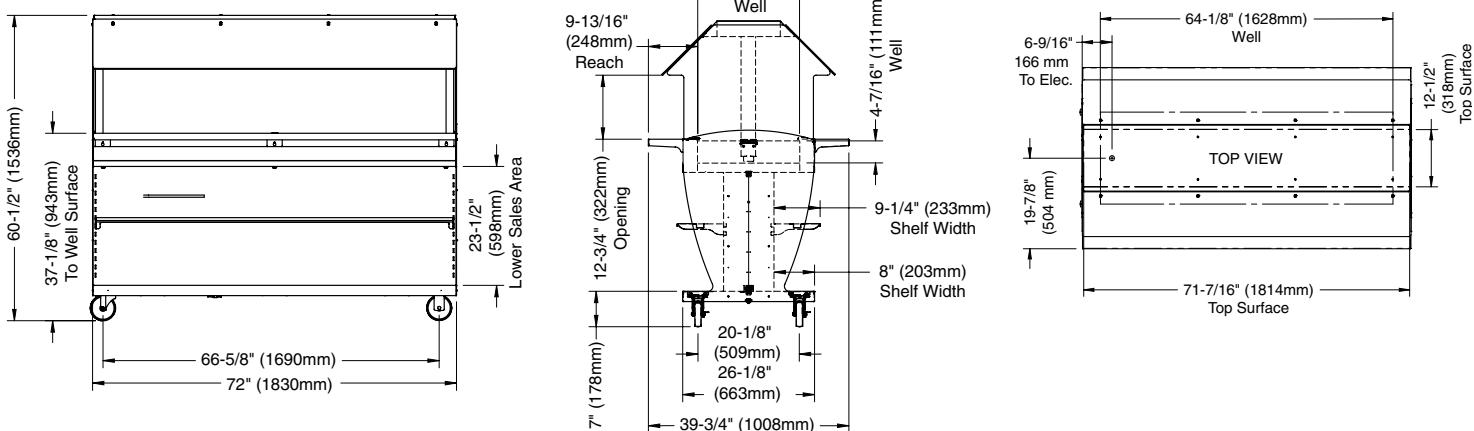
# INSTALLATION

## SITE INSTALLATION

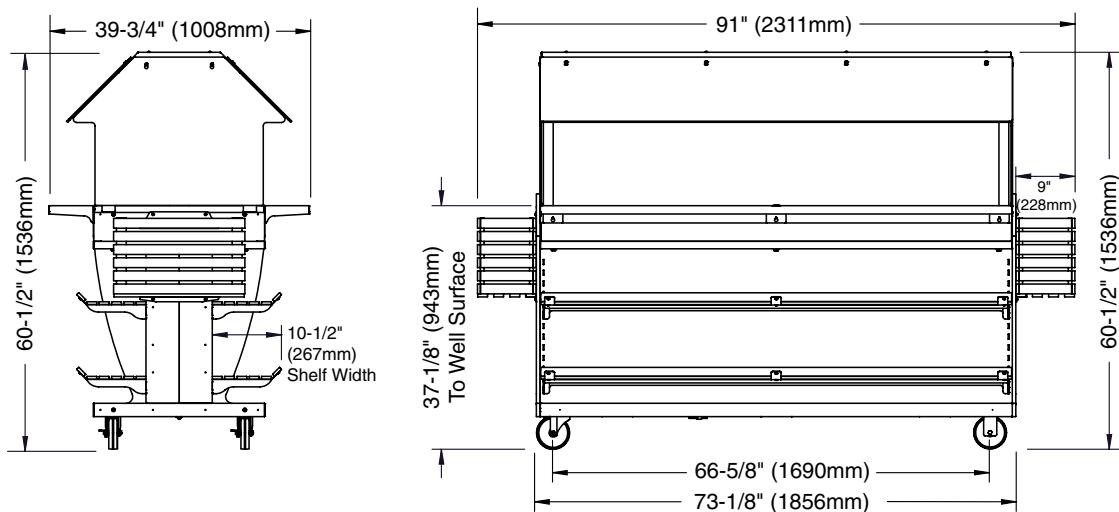
### HFT2-500



### HFT2SYS-500 (Standard)



### HFT2SYS-500 (Deluxe)



# INSTALLATION

## CAPACITIES • OPTIONS

### PRODUCT/PAN CAPACITY - Based on 4" (65mm) deep pans

#### HFT2-300, HFTSYS-300

D4: 62 lb (30 kg) MAX.

MAX. VOLUME: D4: 45 qt (57 L)

FULL-SIZE PANS\*: Three (3) 12" x 20" x 4"  
GN 1/1 (325mm x 530mm x 102mm)

HALF-SIZE PANS\*: Six (6) 12" x 10" x 4"  
GN 1/2 (325mm x 265mm x 102mm)

THIRD-SIZE PANS\*: Nine (9) 12" x 6" x 4"  
GN 1/3 (325mm x 176mm x 102mm)

#### OPTIONS AND ACCESSORIES

Panel Color Choices	SEE SERVICE PARTS
Pan Dividers, Full Size	16019
Pan Dividers, Half and Third Size	11318

\*WILL ALSO ACCEPT 2-1/2" (65mm) DEEP PANS; D6 UNITS WILL ACCEPT 6" (153mm) DEEP PANS

#### HFT2-400, HFTSYS-400

96 lb (44 kg) MAXIMUM

MAX. VOLUME: 60 qt (76 L)

FULL-SIZE PANS\*: Four (4) 12" x 20" x 4"  
GN 1/1 (325mm x 530mm x 102mm)

HALF-SIZE PANS\*: Eight (8) 12" x 10" x 4"  
GN 1/2 (325mm x 265mm x 102mm)

THIRD-SIZE PANS\*: Twelve (12) 12" x 6" x 4"  
GN 1/3 (325mm x 176mm x 102mm)

\*WILL ALSO ACCEPT 2-1/2" (65mm) DEEP PANS; D6 UNITS WILL ACCEPT 6" (153mm) DEEP PANS

#### HFT2-500, HFTSYS-500

120 lb (54 kg) MAXIMUM

MAX. VOLUME: 75 qt (95 L)

FULL-SIZE PANS\*: Five (5) 12" x 20" x 4"  
GN 1/1 (325mm x 530mm x 65mm)

HALF-SIZE PANS\*: Ten (10) 12" x 10" x 4"  
GN 1/2 (325mm x 265mm x 65mm)

THIRD-SIZE PANS\*: Fifteen (15) 12" x 6" x 4"  
GN 1/3 (325mm x 176mm x 65mm)

\*WILL ALSO ACCEPT 2-1/2" (65mm) DEEP PANS; D6 UNITS WILL ACCEPT 6" (153mm) DEEP PANS

# INSTALLATION

## ELECTRICAL CONNECTION

The appliance must be installed by a qualified service technician. The oven must be properly grounded in accordance with the National Electrical Code and applicable local codes.

## DANGER



To avoid electrical shock, this appliance **MUST** be adequately grounded in accordance with local electrical codes or, in the absence of local codes, with the current edition of the National Electrical Code ANSI/NFPA No. 70. In Canada, all electrical connections are to be made in accordance with CSA C22.1, Canadian Electrical Code Part 1 or local codes.



Plug the unit into a properly grounded receptacle ONLY, positioning the unit so that the plug is easily accessible in case of an emergency. Arcing will occur when connecting or disconnecting the unit unless all controls are in the "OFF" position. Proper receptacle or outlet configuration or permanent wiring for this unit must be installed by a licensed electrician in accordance with applicable local electrical codes.

### ELECTRICAL - HFT2-300

VOLTAGE	PHASE	CYCLE/Hz	AMPS	kW	CORD & PLUG
208-240 (AGCY)	1	60	13.6	3.3	NEMA 6-15P
at 208	1	60	11.8	2.5	15A - 250V Plug
at 240	1	60	13.6	3.3	
230	1	50	13.0	3.0	CEE 7/7, 220-230V PLUG

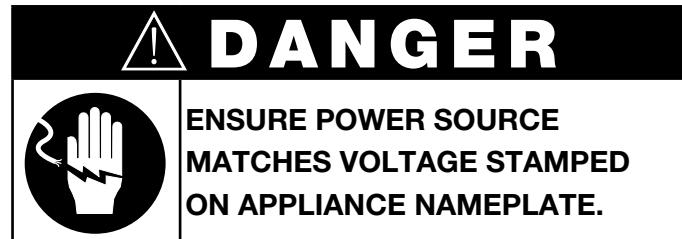
### ELECTRICAL - HFT2-400

VOLTAGE	PHASE	CYCLE/Hz	AMPS	kW	CORD & PLUG
208-240 (AGCY)	1	60	13.7	3.3	NEMA 6-20P
at 208	1	60	11.9	2.5	20A - 250V Plug
at 240	1	60	13.7	3.3	
230	1	50	13.1	3.0	CEE 7/7, 220-230V PLUG

### ELECTRICAL - HFT2-500

VOLTAGE	PHASE	CYCLE/Hz	AMPS	kW	CORD & PLUG
208-240 (AGCY)	1	60	15.7	3.8	NEMA 6-20P
at 208	1	60	13.6	2.8	20A - 250V Plug
at 240	1	60	15.7	3.8	
230	1	50	15.0	3.5	CEE 7/7, 220-230V PLUG

Wire diagrams are included in the literature package supplied with the unit.



### REGARDING INTERNATIONAL STANDARD UNITS:

If the unit is not equipped with flexible cord with plug, an all-pole country approved disconnection device which has a contact separation of at least 3mm in all poles must be incorporated in the fixed wiring for disconnection. When using a cord without a plug, the green/yellow conductor shall be connected to the terminal which is marked with the ground symbol. If a plug is used, the socket outlet must be easily accessible. If the power cord needs replacement, use a similar one obtained from the distributor.

**For CE approved units:** To prevent an electrical shock hazard between the appliance and other appliances or metal parts in close vicinity, an equalization-bonding stud is provided. An equalization bonding lead must be connected to this stud and the other appliances / metal parts to provide sufficient protection against potential difference. The terminal is marked with the following symbol.



# OPERATION

## USER SAFETY INFORMATION

### USER SAFETY INFORMATION:

This appliance is intended for use in commercial establishments by qualified personnel who are familiar with the purpose, limitations, and associated hazards of this appliance. Operating instructions and warnings must be read and understood by all operators and users.

## CAUTION



METAL PARTS OF THIS EQUIPMENT  
BECOME EXTREMELY HOT WHEN  
IN OPERATION. TO AVOID BURNS,  
ALWAYS USE HAND PROTECTION  
WHEN OPERATING THIS APPLIANCE.

## START UP

### BEFORE INITIAL USE:

Before operating the unit, clean both the interior and exterior of the unit with a damp cloth and mild soap solution. Rinse well.

Merchandiser heat plate must be heated to remove surface oils and the accompanying odor produced during the first use of the appliance.

Turn ON/OFF toggle switch to ON position. Turn thermostat to the **10** setting. Allow the unit to heat for 30 minutes or until no odor is detected.



## DANGER



DISCONNECT UNIT FROM  
POWER SOURCE BEFORE  
CLEANING OR SERVICING.

# OPERATION

## OPERATING INSTRUCTIONS

### 1. DO NOT ADD WATER TO HOT WELL

Halo Heat® hot wells maintain a constant and gentle temperature. **Adding water is not recommended** since water will accelerate the deterioration of the product and may damage the unit voiding the warranty.

### 2. PLACE PAN DIVIDERS AND EMPTY PANS IN THE WELLS

**NOTE:** No matter what type of pan configuration chosen, pan separator bars or divider bars must be used to close all gaps between pans, and all gaps between the pans and the edges of the wells. If these gaps are not closed, heat will escape, heat distribution will be uneven, and uniform temperature will be difficult to maintain.

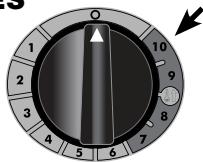
This is a **VERY** important requirement to follow whenever this appliance is in use.

### 3. TURN POWER SWITCH "ON"

Turn toggle switch to "ON" position. Lights will illuminate and hot well will begin to warm.

### 4. PREHEAT AT THE NUMBER "10" SETTING FOR A MINIMUM OF 30 MINUTES

An indicator light will illuminate when the thermostat(s) is (are) turned "**ON**." The unit should be preheated at the **10** setting for a minimum of **30 minutes** before loading the unit with hot food.



### 5. LOAD HOT FOODS INTO THE APPLIANCE

After preheating, place hot foods into the preheated pans located in the appliance or exchange the pans with pre-filled product pans. This appliance is designed for the purpose of hot food holding. Only hot foods should be placed into the unit. Potentially hazardous foods should be held in the unit at setting 10. If lower settings are used, ensure the food has maintained safe food temperatures. Lower settings should be tested by user to ensure food has maintained safe food temperatures between 140° and 160°F (60° and 71°C).

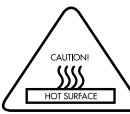
All pan divider bars required must be utilized at all times with the pan configuration chosen. Before loading food into the unit, use a pocket-type thermometer to make certain all products have reached an internal temperature of 140° to 180°F (60° to 82°C). If any food product is not at proper serving temperature, use a Halo Heat cooking and holding oven, set at 250° to 275°F (121° to 135°C), or a Combitherm oven to bring the product within the correct temperature range.

### 6. RESET THERMOSTAT(S) AS NEEDED

After all products are loaded into the unit, it is necessary to reset the thermostat(s). Since proper temperature range depends on the type of products and the quantities being held, it is necessary to periodically use a pocket thermometer to check each item to make certain the correct temperatures are being maintained. Proper temperature range is between a minimum of 140° and 180° F (60° and 82° C).

### 7. TO MAINTAIN PROPER FOOD TEMPERATURE, OVERHEAD HEATING IS REQUIRED.

## CAUTION



METAL PARTS OF THIS EQUIPMENT BECOME EXTREMELY HOT WHEN IN OPERATION. TO AVOID BURNS, ALWAYS USE HAND PROTECTION WHEN OPERATING THIS APPLIANCE.

### 8. SERVE FRESH, HOT FOOD

Keep hot foods looking fresh. Occasionally stir or rotate food as needed. Wipe spills immediately to ensure maximum eye appeal and to ease end of day cleanup.

# OPERATION

## GENERAL HOLDING GUIDELINES

Chefs, cooks and other specialized food service personnel employ varied methods of cooking. Proper holding temperatures for a specific food product must be based on the moisture content of the product, product density, volume, and proper serving temperatures. Safe holding temperatures must also be correlated with palatability in determining the length of holding time for a specific product.

Halo Heat maintains the maximum amount of product moisture content without the addition of water, water vapor, or steam. Maintaining maximum natural product moisture preserves the natural flavor of the product and provides a more genuine taste. In addition to product moisture retention, the gentle properties of Halo Heat maintain a consistent temperature throughout the cabinet without the necessity of a heat distribution fan, thereby preventing further moisture loss due to evaporation or dehydration.

When product is removed from a high temperature cooking environment for immediate transfer into equipment with the lower temperature required for hot food holding, condensation can form on the outside of the product and on the inside of plastic containers used in self-service applications. Allowing the product to release the initial steam and heat produced by high temperature cooking can alleviate this condition. To preserve the safety and quality of freshly cooked foods however, a maximum of 1 to 2 minutes must be the only time period allowed for the initial heat to be released from the product.

Use a metal-stemmed thermometer to measure the internal temperature of the product being held. Adjust the thermostat setting to achieve the best overall setting based on internal product temperature.

HOLDING TEMPERATURE RANGE		
MEAT	FAHRENHEIT	CELSIUS
BEEF ROAST — Rare	130°F	54°C
BEEF ROAST — Med/Well Done	155°F	68°C
BEEF BRISKET	160° — 175°F	71° — 79°C
CORN BEEF	160° — 175°F	71° — 79°C
PASTRAMI	160° — 175°F	71° — 79°C
PRIME RIB — Rare	130°F	54°C
STEAKS — Broiled/Fried	140° — 160°F	60° — 71°C
RIBS — Beef or Pork	160°F	71°C
VEAL	160° — 175°F	71° — 79°C
HAM	160° — 175°F	71° — 79°C
PORK	160° — 175°F	71° — 79°C
LAMB	160° — 175°F	71° — 79°C
POULTRY		
CHICKEN — Fried/Baked	160° — 175°F	71° — 79°C
DUCK	160° — 175°F	71° — 79°C
TURKEY	160° — 175°F	71° — 79°C
GENERAL	160° — 175°F	71° — 79°C
FISH/SEAFOOD		
FISH — Baked/Fried	160° — 175°F	71° — 79°C
LOBSTER	160° — 175°F	71° — 79°C
SHRIMP — Fried	160° — 175°F	71° — 79°C
BAKED GOODS		
BREADS/ROLLS	120° — 140°F	49° — 60°C
MISCELLANEOUS		
CASSEROLES	160° — 175°F	71° — 79°C
DOUGH — Proofing	80° — 100°F	27° — 38°C
EGGS — Fried	150° — 160°F	66° — 71°C
FROZEN ENTREES	160° — 175°F	71° — 79°C
HORS D'OEUVRES	160° — 180°F	71° — 82°C
PASTA	160° — 180°F	71° — 82°C
PIZZA	160° — 180°F	71° — 82°C
POTATOES	180°F	82°C
PLATED MEALS	140° — 165°F	60° — 74°C
SAUCES	140° — 200°F	60° — 93°C
SOUP	140° — 200°F	60° — 93°C
VEGETABLES	160° — 175°F	71° — 79°C
THE HOLDING TEMPERATURES LISTED ARE SUGGESTED GUIDELINES ONLY. ALL FOOD HOLDING SHOULD BE BASED ON INTERNAL PRODUCT TEMPERATURES. ALWAYS FOLLOW LOCAL HEALTH (HYGIENE) REGULATIONS FOR ALL INTERNAL TEMPERATURE REQUIREMENTS.		

# CARE AND CLEANING

## CLEANING AND PREVENTIVE MAINTENANCE

### PROTECTING STAINLESS STEEL SURFACES

 It is important to guard against corrosion in the care of stainless steel surfaces. Harsh, corrosive, or inappropriate chemicals can completely destroy the protective surface layer of stainless steel. Abrasive pads, steel wool, or metal implements will abrade surfaces causing damage to this protective coating and will eventually result in areas of corrosion. Even water, particularly hard water that contains high to moderate concentrations of chloride, will cause oxidation and pitting that result in rust and corrosion. In addition, many acidic foods spilled and left to remain on metal surfaces are contributing factors that will corrode surfaces.

Proper cleaning agents, materials, and methods are vital to maintaining the appearance and life of this appliance. Spilled foods should be removed and the area wiped as soon as possible but at the very least, a minimum of once a day. Always thoroughly rinse surfaces after using a cleaning agent and wipe standing water as quickly as possible after rinsing.

### CLEANING AGENTS

Use non-abrasive cleaning products designed for use on stainless steel surfaces. Cleaning agents must be chloride-free compounds and must not contain quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel surfaces. Always use the proper cleaning agent at the manufacturer's recommended strength. Contact your local cleaning supplier for product recommendations.

### CLEANING MATERIALS

The cleaning function can usually be accomplished with the proper cleaning agent and a soft, clean cloth. When more aggressive methods must be employed, use a non-abrasive scouring pad on difficult areas and make certain to scrub with the visible grain of surface metal to avoid surface scratches. Never use wire brushes, metal scouring pads, or scrapers to remove food residue.



TO PROTECT STAINLESS STEEL SURFACES, COMPLETELY AVOID THE USE OF ABRASIVE CLEANING COMPOUNDS, CHLORIDE BASED CLEANERS, OR CLEANERS CONTAINING QUATERNARY SALTS. NEVER USE HYDROCHLORIC ACID (MURIATIC ACID) ON STAINLESS STEEL. NEVER USE WIRE BRUSHES, METAL SCOURING PADS OR SCRAPERS.

# CARE AND CLEANING

## EQUIPMENT CARE

The cleanliness and appearance of this equipment will contribute considerably to operating efficiency and savory, appetizing food.



Good equipment that is kept clean works better and lasts longer.

## THOROUGHLY CLEAN THE APPLIANCE DAILY

1. Remove food from merchandiser.
2. Turn ON/OFF toggle switch to the "OFF" position. Disconnect unit from power source. Let the unit cool.
3. Clean heat plate and metal surfaces of the unit with a damp, clean cloth and any good commercial detergent at the recommended strength. Use a plastic scouring pad or oven cleaner for difficult areas. Rinse surfaces by wiping with sponge and clean warm water

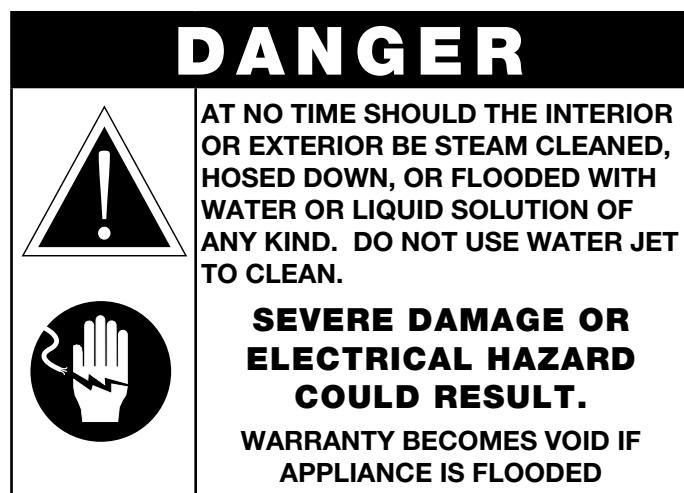


- NOTE:** Avoid the use of abrasive cleaning, compounds, chloride based cleaners, or cleaners containing quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel.
4. Surfaces can be wiped with a sanitizing solution after cleaning and rinsing. This solution must be approved for use on stainless steel food contact surfaces.

5. Clean heat guards with a window cleaner.

6. To help maintain the protective film coating on polished stainless steel, clean the exterior of the unit with a cleaner recommended for stainless steel surfaces. Spray the cleaning agent on a cloth and wipe with the grain of the stainless steel.

Always follow appropriate state or local health (hygiene) regulations regarding all applicable cleaning and sanitation requirements for foodservice equipment.



# SANITATION

Food flavor and aroma are usually so closely related that it is difficult, if not impossible, to separate them. There is also an important, inseparable relationship between cleanliness and food flavor. Cleanliness, top operating efficiency, and appearance of equipment contribute considerably to savory, appetizing foods. Good equipment that is kept clean, works better and lasts longer.

Most food imparts its own particular aroma and many foods also absorb existing odors. Unfortunately, during this absorption there is not distinction between GOOD and BAD odors. The majority of objectionable flavors and odors troubling food service operations are caused by bacteria growth. Sourness, rancidity, mustiness, stale or other OFF flavors are usually the result of germ activity.

The easiest way to insure full, natural food flavor is through comprehensive cleanliness. This means good control of both visible soil (dirt) and invisible soil (germs). A thorough approach to sanitation will provide essential cleanliness. It will assure an attractive appearance of equipment, along with maximum efficiency and utility. More importantly, a good sanitation program provides one of the key elements in the prevention of food-borne illnesses.

A controlled holding environment for prepared foods is just one of the important factors involved in the prevention of food-borne illnesses. Temperature monitoring and control during receiving, storage, preparation, and the service of foods are of equal importance.

The most accurate method of measuring safe temperatures of both hot and cold foods is by internal product temperature. A quality thermometer is an effective tool for this purpose, and should be routinely used on all products that require holding at a specific temperature.

A comprehensive sanitation program should focus on the training of staff in basic sanitation procedures. This includes personal hygiene, proper handling of raw foods, cooking to a safe internal product temperature, and the routine monitoring of internal temperatures from receiving through service.

Most food-borne illnesses can be prevented through proper temperature control and a comprehensive program of sanitation. Both these factors are important to build quality service as the foundation of customer satisfaction. Safe food handling practices to prevent food-borne illness is of critical importance to the health and safety of your customers.

HACCP, an acronym for Hazard Analysis (at) Critical Control Points, is a quality control program of operating procedures to assure food integrity, quality, and safety. Taking steps necessary to augment food safety practices is both cost effective and relatively simple. While HACCP guidelines go far beyond the scope of this manual, additional information is available by contacting:

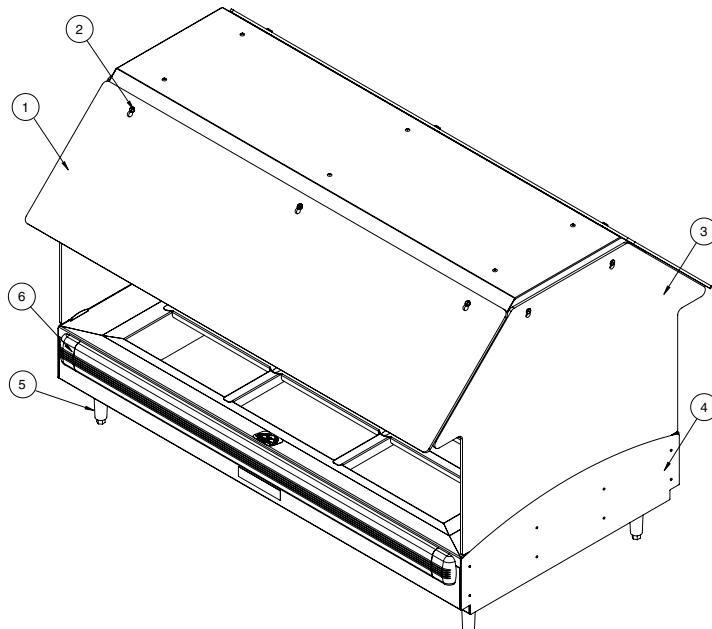
**CENTER FOR FOOD SAFETY AND APPLIED  
NUTRITION FOOD AND DRUG ADMINISTRATION  
1-888-SAFEFOOD**

INTERNAL FOOD PRODUCT TEMPERATURES		
HOT FOODS		
DANGER ZONE	40° TO 140°F	(4° TO 60°C)
CRITICAL ZONE	70° TO 120°F	(21° TO 49°C)
SAFE ZONE	140° TO 165°F	(60° TO 74°C)
COLD FOODS		
DANGER ZONE	ABOVE 40°F	(ABOVE 4°C)
SAFE ZONE	36° TO 40°F	(2° TO 4°C)
FROZEN FOODS		
DANGER ZONE	ABOVE 32°F	(ABOVE 0°C)
CRITICAL ZONE	0° TO 32°F	(-18° TO 0°C)
SAFE ZONE	0°F or below	(-18°C or below)

# SERVICE

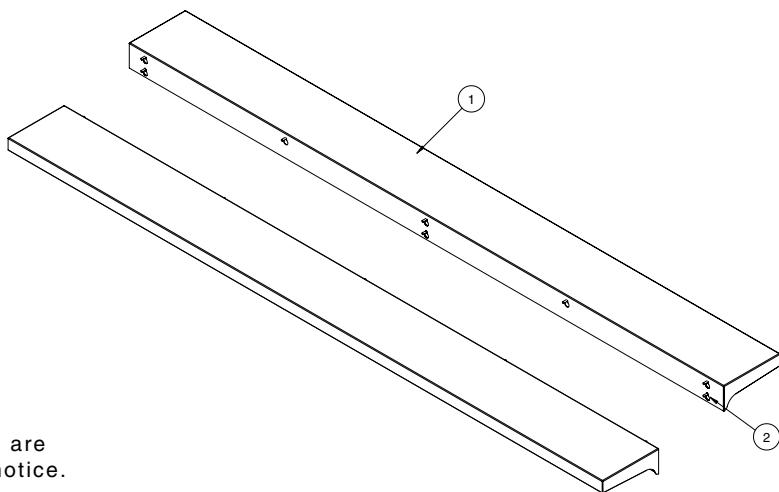
## SERVICE PARTS

MODEL >		HFT2-300		HFT2-400		HFT2-500	
ITEM	DESCRIPTION	PART NO.	QTY	PART NO.	QTY	PART NO.	QTY
1	LEXAN GUARD	GD-29516	2	GD-29517	2	GD-29412	2
2	SHOULDER STUD, LONG S/S	ST-2547	12	ST-2547	12	ST-2547	12
3	LEXAN GUARD, FULL SIDE	GD-29413	2	GD-29413	2	GD-29413	2
4	SIDE PANEL, S/S	1012070	2	1012070	2	1012070	2
5	LEGS, 4" (102mm) ADJUSTABLE (CT ONLY)	LG-2044	4	LG-2044	4	LG-2044	4
6	BUMPER (230V INT'L ONLY)	5011297	2	—	—	—	—
—	— BUMPER TRACK	1010949	2	—	—	—	—
—	— BUMPER RAIL	1010952	2	—	—	—	—
—	— BUMPER END CAP	BM-29064	4	—	—	—	—



## TRAY SLIDES

MODEL >		HFT2-300		HFT2-400		HFT2-500	
ITEM	DESCRIPTION	PART NO.	QTY	PART NO.	QTY	PART NO.	QTY
1	TRAY SLIDE, SPOT	5013497	2	5013542	2	5013486	2
2	SCREW, PHIL, 8-32 X 1/2"	SC-2425	12	SC-2425	16	SC-2425	16



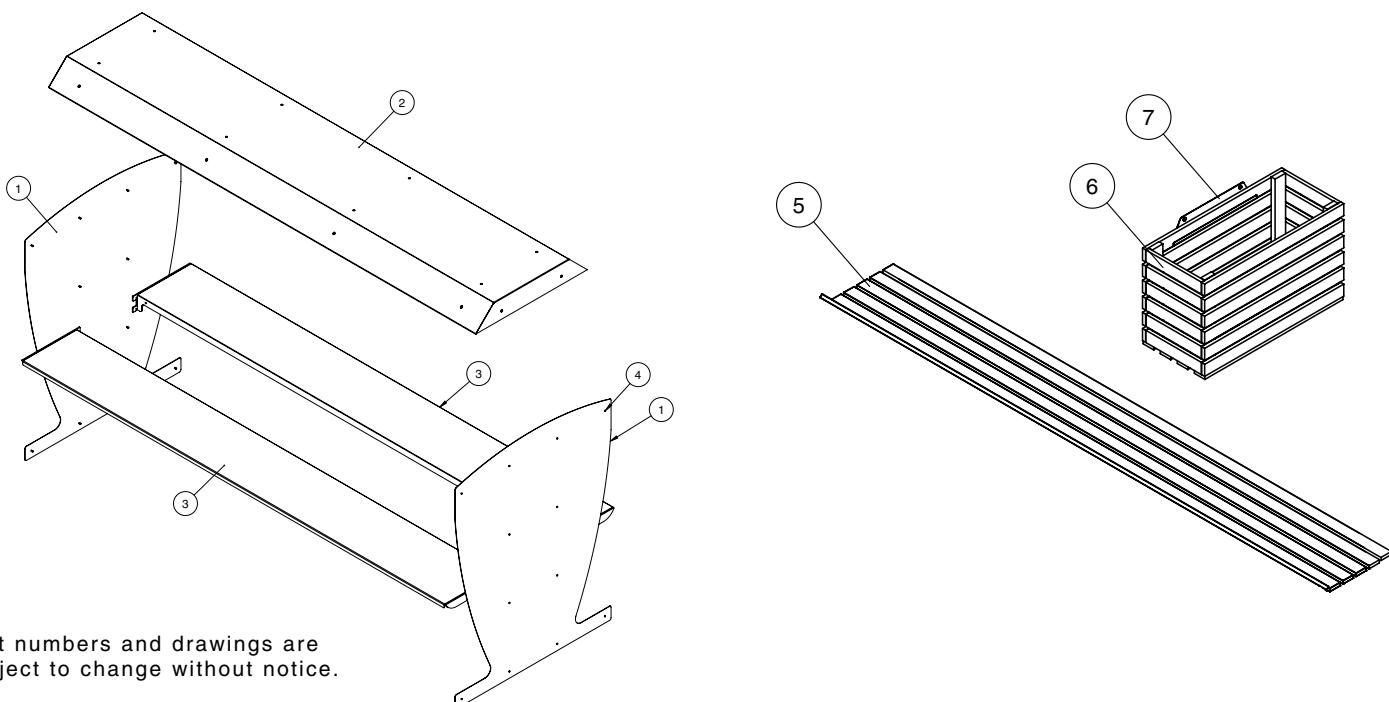
Part numbers and drawings are subject to change without notice.

# SERVICE

## SERVICE PARTS LIST - PANEL COLORS, BASKETS

MODEL >		HFT2-300		HFT2-400		HFT2-500	
ITEM	DESCRIPTION	PART NO.	QTY	PART NO.	QTY	PART NO.	QTY
1	PANEL, END, PAINTED - STANDARD STAINLESS STEEL BLACK SPECIFY CUSTOM COLOR	1006498 1006499 1006497	2	1006498 1006499 1006497	2	1006498 1006499 1006497	2
	PANEL, END, PAINTED - COUNTER-TOP STAINLESS STEEL BLACK SPECIFY CUSTOM COLOR	1012070 1012069 1012071	2	1012070 1012069 1012071	2	1012070 1012069 1012071	2
	PANEL, END, FORMICA - DELUXE BLACK SPECIFY CUSTOM COLOR	PE-28241 PE-27805	2	PE-28241 PE-27805	2	PE-28241 PE-27805	2
2	CANOPY TOP COVER, OUTER STAINLESS STEEL BLACK SPECIFY CUSTOM COLOR	5005294 5005285 5005295	1	5013547 5013544 5013548	1	5007920 5007449 5007450	1
3	SHELF, STANDARD/DELUXE STAINLESS STEEL BLACK CUSTOM COLOR	5006786 5006851 5006852	2	5013550 5013549 5013551	2	5007615 5007616 5007971	2
4	RIVET	RI-2100	24	RI-2100	24	RI-2100	24
5	SHELF, WOOD - DELUXE ONLY	5006642	4	5013563	4	5007638	4
6	BASKET, WOOD - DELUXE ONLY	BS-27896	2	BS-27896	2	BS-27896	2
7	HOLDER 1, SIDE BASKET	1006624	2	1006624	2	1006624	2
8*	HOLDER 2, SIDE BASKET	1007795	2	1007795	2	1007795	2
9*	NUT, INSERT, THREADED	NU-24613	8	NU-24613	8	NU-24613	8
10*	SCREW, CT, M4.8 X 16MM	SC-22307	8	SC-22307	8	SC-22307	8
11*	SCREW, 1/4-20 X 1 PHIL	SC-22466	8	SC-22466	8	SC-22466	8

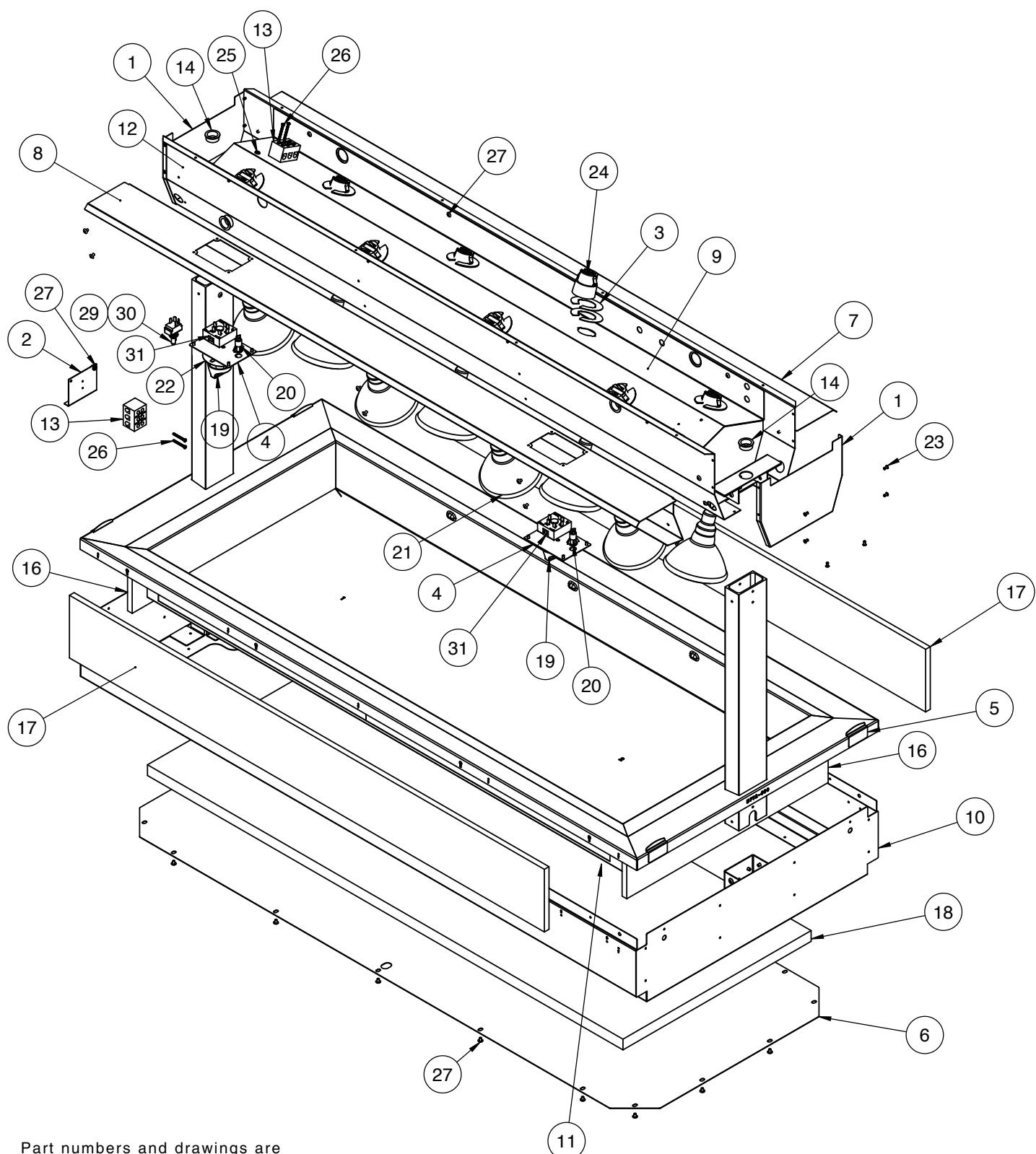
\*NOT SHOWN



Part numbers and drawings are subject to change without notice.

# SERVICE

**HFT2-400 Shown**



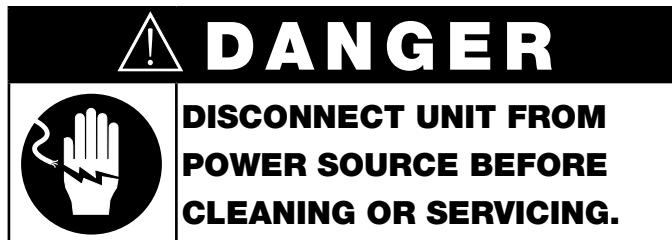
Part numbers and drawings are  
subject to change without notice.

# SERVICE

## SERVICE PARTS LIST - CORE UNIT

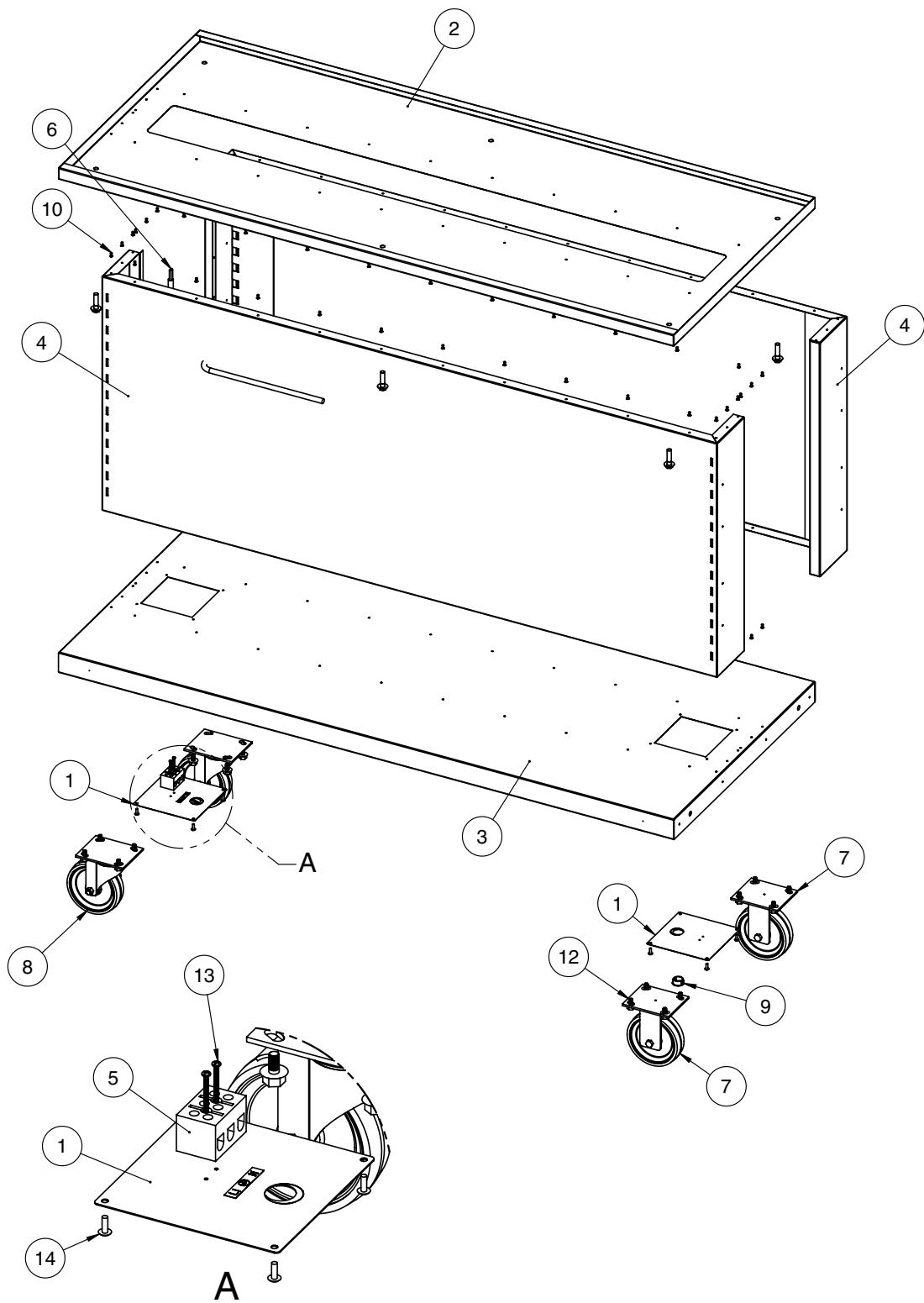
MODEL >		HFT2-300		HFT2-400		HFT2-500	
ITEM	DESCRIPTION	PART NO.	QTY	PART NO.	QTY	PART NO.	QTY
1	INNER TOP LIGHT END	1007098	2	1007098	2	1007098	2
2	TERMINAL BRACKET HOLDER	1007507	1	1007507	1	1007507	1
3	RECEPTACLE LOCK	1008952	12	1008952	16	1008952	16
4	CONTROL ATTACHMENT PLATE	1012113	1	1012113	2	1012113	2
5	END LEXAN POSITION CLIP	1012185	4	1012185	4	1008952	16
6	BOTTOM COVER PANEL	1007110	1	1012222	1	1008268	1
7	INNER TOP SIDE	1007080	1	1012223	1	1008327	1
8	INNER TOP CONTROL SIDE	1012196	1	1012224	1	1011896	1
9	INNER LIGHT PANEL	1008316	1	1012226	1	1008330	1
10	WELL ENCLOSURE, SPOT	5013467	1	5013526	1	5012935	1
11	ELEMENT KIT	4880	1	4881	1	4880	1
12	INNER TOP SPOT	5005806	1	5013538	1	5007446	1
13	T-BLOCK	BK-3019	2	BK-3019	2	BK-3019	2
14	BUSHING, 1" HOLE	BU-33619	4	BU-33619	4	BU-33619	5
15*	HINGE, UPRIGHT SUPPORT	HG-27333	2	HG-27333	2	HG-27333	2
16	INSULATION, BOARD, 5.875 X 21.670, 1/2"	IN-2003	2	IN-2003	2	IN-2003	2
17	INSULATION, BOARD, 6 X 50.125, 1/2"	IN-2003	2	IN-2003	2	IN-2003	2
18	INSULATION, FLUFF	IN-22364	1	IN-22364	1	IN-22364	1
19	KNOB, THERMOSTAT	KN-26568	1	KN-26568	2	KN-26568	2
20	PILOT LIGHT, WHITE	LI-3951	1	LI-3951	2	LI-3951	2
21	LAMP, FLOOD	LP-33783	6	LP-33783	8	LP-33783	8
22	PANEL OVERLAY	PE-29421	1	PE-29421	2	PE-29421	2
23	RIVET, BLIND #44, STNLS	RI-2100	12	RI-2100	20	RI-2100	12
24	RECEPTACLE, SNAP IN	RP-3955	6	RP-3955	8	RP-3955	8
25	SCREW, GROUND 10-32 X 1/4 PAN HD	SC-2190	2	SC-2190	2	SC-2190	2
26	SCREW, 6-32 X 1-1/4 ROUND HD	SC-2365	4	SC-2365	4	SC-2365	4
27	SCREW, 8-32 X 1/4 PHIL	SC-2459	62	SC-2459	68	SC-2459	74
28	SCREW, 10-32 X 1/4 PAN HEAD	SC-26791	12	SC-26791	12	SC-26791	12
29	SWITCH, 20A, 250V, TOGGLE SWITCH	SW-3528	1	SW-3528	2	SW-3528	1
30	SWITCH, RUBBER BOOT W/ NUT	SW-3905	1	SW-3905	2	SW-3905	1
31	THERMOSTAT, 240V, 13A	TT-34981	1	TT-34981	2	TT-34981	2
32*	CORDSET 208-240V 230V	CD-33840 CD-3922	1 1	CD-3588 CD-3922	1 1	CD-3588 CD-3922	1 1
33*	BUSHING, STRAIN RELIEF	BU-3964	2	BU-3964	2	BU-3964	2
34*	POWER SWITCH	SW-3528	1	SW-3528	1	SW-3528	1
35*	GROUND STUD, 230V ONLY	5012929	1	5012929	1	5012929	1

\*NOT SHOWN



# SERVICE

## HFT2-400 Base Shown



Part numbers and drawings are  
subject to change without notice.

# SERVICE

## SERVICE PARTS LIST - BASE

MODEL >		HFT2-300		HFT2-400		HFT2-500	
ITEM	DESCRIPTION	PART NO.	QTY	PART NO.	QTY	PART NO.	QTY
1	CORD COVER PLATE	1006591	2	1006591	2	1006591	2
2	BASE STAND TOP PANEL	1006995	1	1012228	1	1008348	1
3	BASE SUPPORT SPOT	5005235	1	5013540	1	5007460	1
4	BASE STIFFENER, SPOT	5013483	2	5013541	2	5012923	2
5	T-BLOCK	BK-3019	1	BK-3019	1	BK-3019	1
6*	CORDSET 208-240V 230V	CD-33840 CD-3922	1 1	CD-3588 CD-3922	1 1	CD-3588 CD-3922	1 1
7	CASTER, RIGID 5" (127mm)	CS-2025	2	CS-2025	2	CS-2025	2
8	CASTER, SWIVEL 5" (127mm) WITH BRAKE	CS-2026	2	CS-2026	2	CS-2026	2
9	PLUG, 7/8" HOLE	PG-3559	1	PG-3559	1	PG-3559	1
10	RIVET, BLIND, #44, STNLS	RI-2100	72	RI-2100	64	RI-2100	72
11*	3/8-16 X 1-1/2" HEX CAP	SC-22553	6	SC-22553	6	SC-22553	6
12	5/16-18 X 5/8" SERR. HEX HD SCREW	SC-2351	16	SC-2351	16	SC-2351	16
13	6-32 X 1-1/4" ROUND HD	SC-2365	2	SC-2365	2	SC-2365	2
14	8-32 X 1/2" PHIL SCREW	SC-2425	8	SC-2425	8	SC-2425	8
15*	3/8" ID 7/8" OD S/S FLAT WASHER	WS-23991	6	WS-23991	6	WS-23991	6

\*NOT SHOWN

CABLE HEATING REPLACEMENT SERVICE KITS		HFT2-300	HFT2-400	HFT2-500
KIT NUMBER >		4880	4881	4880
<b>SERVICE KIT INCLUDES:</b>				
CB-3045	CABLE HEATING ELEMENT	132 ft	144 ft	120 ft
CR-3226	RING CONNECTOR	8	12	8
IN-3488	INSULATION CORNER	8 ft	8 ft	8 ft
BU-3105	SHOULDER BUSHING	8	12	8
BU-3106	CUP BUSHING	8	12	8
SL-3063	INSULATING SLEEVE	8	12	8
TA-3540	HIGH TEMP ELECTRICAL TAPE	1 roll	1 roll	1 roll
ST-2439	10.32 STUD	8	12	8
NU-2215	HEX NUT	32	24	32

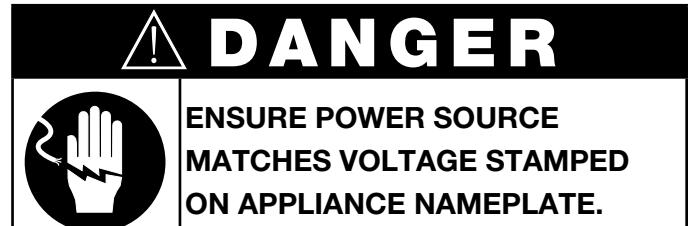
## CALIBRATION

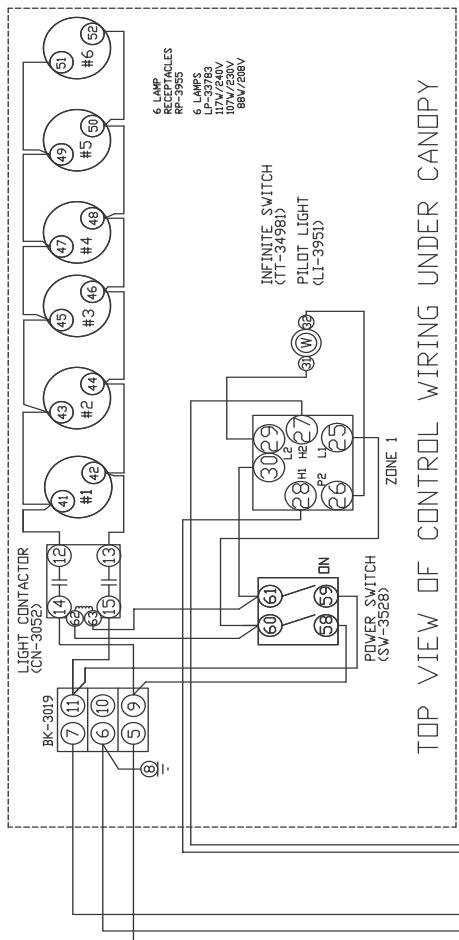
### CALIBRATION PROCEDURES

Every unit is calibrated at the factory. Only a qualified service technician should calibrate the unit in the field if necessary.

**SHOCK RISK WARNING:** Unit must be disconnected from power source before making adjustments or calibrating switch.

**TOOLS REQUIRED:** 2mm allen (hex) wrench





TOP VIEW OF CONTROL WIRING UNDER CANOPY

ZONE 1

POWER SWITCH  
(SW-3528)

LIGHT CONTACTOR  
(BK-3019)

INFINITE SWITCH  
(TT-3498)  
PILOT LIGHT  
(KL-395D)

6 LIGHT RECEPTACLES  
RP-395S

6 AMPS

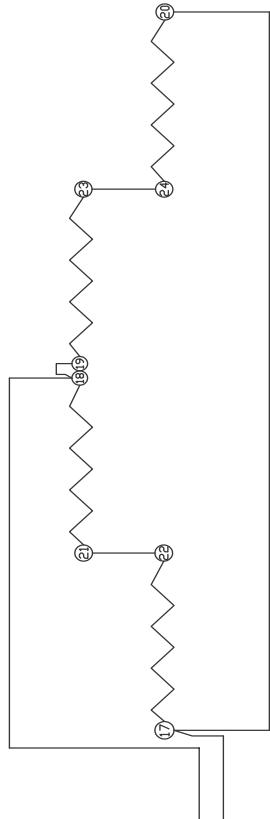
L-P-37513

17V/240V

107V/230V

85V/208V

IMPORTANT: THIS IS THE  
BOTTOM VIEW OF THE WELL.



4: WRAPS OF HI-TEMP CABLE [CB-3045] 33' 1" = 21.81 OHMS EACH @ AMBIENT TEMP

DESIGN	VOLTS	WATTS	AMPS
208V	2457W	11.8A	
240V	3270W	13.6A	
240V	3270W	13.6A	

DESIGN	VOLTS	WATTS	AMPS
230V	3000W	13A	
230V	3000W	13A	
230V	3000W	13A	

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1

WIRING DIAGRAM	DWG:	77390	SHEET
230V 60Hz	230V 60Hz	2/21/11	1.DF.1

ALTO-SHAAW	DWG:	77390	SHEET
230V 50/60Hz	230V 60Hz	2/21/11	1.DF.1



# TRANSPORTATION DAMAGE and CLAIMS



All Alto-Shaam equipment is sold F.O.B. shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, it is a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

1. Make an immediate inspection while the equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.
2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.
3. Note all damage to packages directly on the carrier's delivery receipt.
4. Make certain the driver signs this receipt. If he refuses to sign, make a notation of this refusal on the receipt.
5. If the driver refuses to allow inspection, write the following on the delivery receipt:  
*Driver refuses to allow inspection of containers for visible damage.*
6. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of the time, date, and the person called.
7. Save any packages and packing material for further inspection by the carrier.
8. Promptly file a written claim with the carrier and attach copies of all supporting paperwork.

We will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. We cannot, however, file any damage claims for you, assume the responsibility of any claims, or accept deductions in payment for such claims.

## LIMITED WARRANTY

Alto-Shaam, Inc. warrants to the original purchaser only that any original part that is found to be defective in material or workmanship will, at Alto-Shaam's option, subject to provisions hereinafter stated, be replaced with a new or rebuilt part.

### The parts warranty period is as follows:

For the refrigeration compressor on Alto-Shaam Quickchillers™, five (5) years from the date of installation.

For the heating element on Halo Heat® cooking and holding ovens, as long as the original purchaser owns the oven. This excludes holding only equipment.

For all other parts, one (1) year from the date of installation or fifteen (15) months from the shipping date, whichever occurs first.

The labor warranty period is one (1) year from the date of installation or fifteen (15) months from the shipping date, whichever occurs first.

Alto-Shaam will bear normal labor charges performed during standard business hours, excluding overtime, holiday rates or any additional fees.

To be valid, a warranty claim must be asserted during the applicable warranty period. This warranty is not transferable.

### THIS WARRANTY DOES NOT APPLY TO:

1. Calibration.
2. Replacement of light bulbs, door gaskets, and/or the replacement of glass due to damage of any kind.
3. Equipment damage caused by accident, shipping, improper installation or alteration.
4. Equipment used under conditions of abuse, misuse, carelessness or abnormal conditions, including but not limited to, equipment subjected to harsh or inappropriate chemicals, including but not limited to, compounds containing chloride or quaternary salts, poor water quality, or equipment with missing or altered serial numbers.
5. Damage incurred as a direct result of poor water quality, inadequate maintenance of steam generators and/or surfaces affected by water quality. Water quality and required maintenance of steam generating equipment is the responsibility of the owner/operator.
6. Damage caused by use of any cleaning agent other than Alto-Shaam's Combitherm® Cleaner, including but not limited to damage due to chlorine or other harmful chemicals. **Use of Alto-Shaam's Combitherm® Cleaner on Combitherm® ovens is highly recommended.**
7. Any losses or damage resulting from malfunction, including loss of product, food product, revenue, or consequential or incidental damages of any kind.
8. Equipment modified in any manner from original model, substitution of parts other than factory authorized parts, removal of any parts including legs, or addition of any parts.

This warranty is exclusive and is in lieu of all other warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. In no event shall Alto-Shaam be liable for loss of use, loss of revenue or profit, or loss of product, or for any indirect, special, incidental, or consequential damages. No person except an officer of Alto-Shaam, Inc. is authorized to modify this warranty or to incur on behalf of Alto-Shaam any other obligation or liability in connection with Alto-Shaam equipment.

ALTO-SHAAM

Effective November 1, 2011

RECORD THE MODEL AND SERIAL NUMBER OF THE APPLIANCE FOR EASY REFERENCE.

ALWAYS REFER TO BOTH MODEL AND SERIAL NUMBER IN ANY CONTACT WITH ALTO-SHAAM REGARDING THIS APPLIANCE.

Model: \_\_\_\_\_ Date Installed: \_\_\_\_\_  
Voltage: \_\_\_\_\_ Purchased From: \_\_\_\_\_  
Serial Number: \_\_\_\_\_

**W164 N9221 Water Street • P.O. Box 450 • Menomonee Falls, Wisconsin 53052-0450 • U.S.A.**

PHONE: 262.251.3800 • 800.558-8744 USA/CANADA FAX: 262.251.7067 • 800.329.8744 U.S.A. ONLY

[www.alto-shaam.com](http://www.alto-shaam.com)

PRINTED IN U.S.A.